

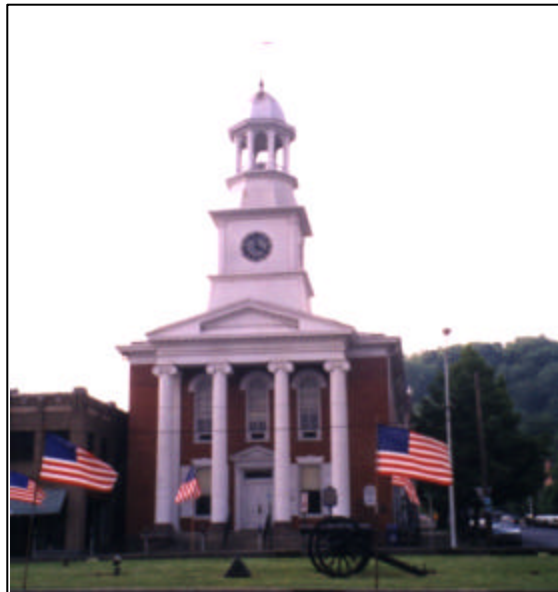
**SWANA RECYCLING  
TECHNICAL ASSISTANCE STUDY**

**FINAL REPORT**

**IMPLEMENTATION OF THE PROPOSED MIFFLIN COUNTY  
REFUSE AND RECYCLING DEPOT  
& SECTION 902 GRANT ELIGIBLE COMPONENTS**

**Prepared for:**

**MIFFLIN COUNTY SOLID WASTE AUTHORITY,  
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**HARRISBURG, PENNSYLVANIA**

**June 2004**

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**& SECTION 902 GRANT ELIGIBLE COMPONENTS**

**1.0 INTRODUCTION**

Through the PA Recycling Technical Assistance program, the Mifflin County Solid Waste Authority (MCSWA) was approved to evaluate improvements to the County’s existing recycling program, in conjunction with construction of a municipal waste transfer and recycling depot to be located at the MCSWA’s Barner Landfill site. Under this program, technical assistance was provided by Gannett Fleming (GF). GF assisted the MCSWA in identifying potential recyclable drop-off sites. In addition, GF outlined the Section 902 Grant-eligible components of the proposed Mifflin County Refuse and Recycling Depot (MCRRD) that will be constructed in Derry Township near Lewistown, PA.

The MCSWA is committed to the successful implementation of the County Municipal Waste Management Plan (Plan) that was updated and adopted February 20, 2003. The Plan goals call for an improved County recycling program. The proposed recycling program described in this report targets diversion of recyclables from the waste stream from areas in the County that currently do not have recycling opportunities. The MCSWA is also committed to the sustainable operation of the proposed recycling facility and transfer operation to serve all County residents, schools, and businesses and to assure the MCSWA can continue to operate as a public entity.

A more detailed description of work tasks for this project is provided in the Scope of Work presented below. Upon completion, a brief summary report of this project will be submitted in conjunction with the MCSWA’s Section 902 Grant application as supporting documentation for implementing this project.

**1.1 Scope of Work**

**Task #1** Gannett Fleming staff will work with the MCSWA to gather pertinent background information required for the completion of this study. This will include information about the existing recycling operations and information about the draft Section 902 Grant Application for the proposed transfer station/ recycling facility.

**Task #2** GF will work with the MCSWA to identify proposed recyclables drop-off locations in the County. GF will describe the anticipated improvements to the County recycling program that may result from the proposed Mifflin County Refuse and Recycling Depot (MCRRD). In addition, GF will describe the proposed operation and processing activities for the MCRRD and describe how the drop-off locations will be supported by the infrastructure of the recycling portion of the facility. Additionally, the relationship between the proposed recyclables drop-off sites and the recycling initiatives from the recently completed Plan will be described.

**Task #3** GF will identify the Section 902 Grant eligible components of the proposed MCRRD. Task 3 will include the preparation of a brief comprehensive report containing findings and recommendations.

## **2.0 BACKGROUND**

The MCSWA is applying for an Act 101, Section 902, Recycling Development and Implementation Grant in order to expand and improve the MCSWA's existing countywide recycling program. The existing drop-off recycling program does not adequately serve all the residents and businesses of Mifflin County, which has a population of 46,486 (2000 Census). The Borough of Lewistown has a population of 8,998 and is the County's only Act 101 mandated municipality.

In the past, Mifflin County has struggled to implement and expand its recycling program, primarily in the wake of financial and operational constraints associated with the MCSWA's Barner Landfill. These constraints were, in large part, created by the diversion of a substantial percentage of Mifflin County waste to an out-of-County landfill by a private corporation (in violation of the County plan). In addition, limited recycling equipment coupled with limited handling/ processing capabilities at the Barner Landfill site have been contributing factors that have prohibited the feasible development of a more sound recycling system for Act 101 recyclables in Mifflin County. Under these conditions the MCSWA concentrated its efforts on the continued operation of the Barner Landfill and financial self-preservation. At this time the "missing" Mifflin County waste is now being directed to the Barner Landfill as required by the County Plan. As a result, the MCSWA has successfully securing improved financial stability and is in a better position to move forward with an enhanced recycling program that will be supported by the infrastructure of the proposed MCRRD.

In light of these tough financial times, the MCSWA recycling program concentrated on and maintained extensive recycling services for non-Act 101 recyclable materials such as bulky items, white goods, scrap metals, and yard waste. Recycling these materials was critical to the survivability of the Barner Landfill operation, benefited the public, and provided an alternative to illegal dumping in the County.

The recently updated Mifflin County Municipal Waste Plan (Plan) established a number of recycling initiatives to improve recycling opportunities for County residents and to help Mifflin County improve the existing recycling program and move toward Pennsylvania's 35 percent recycling goal. In line with the Plan initiatives, the proposed Mifflin County Refuse and Recycling Depot (MCRRD) is designed to contain the infrastructure (i.e. recyclables collection, receiving, processing, and storage capabilities) to improve all aspects of the MCSWA recycling program and enable the successful expansion of the existing drop-off recycling program. The proposed improved and expanded drop-off system, supported by the recycling facility, will provide new opportunities and more convenient outlets for recycling that currently do not exist for the majority of Mifflin County residents. In addition, the recycling facility will allow for a more economically feasible method of receiving and consolidating recyclables. Processing capabilities will generate marketing opportunities for Mifflin County recyclables collected by the MCSWA program.

### 3.0 EXISTING RECYCLING SYSTEM

Currently, the 46,486 residents and the businesses of Mifflin County, with the exception of approximately 9,000 residents in Lewistown Borough, do not have a viable recycling program. The bulk of the citizens and businesses of Mifflin County do not have access to convenient recycling outlets and must depend on a few private recycling operations that accept a limited number of different recyclable materials. As documented by the 2003 Act 101 Annual County Recycling Report, the total material recycled in Mifflin County was as follows:

1. Lewistown Borough-635.6 tons (5.8%)
2. Mifflin Co. SWA-552.95 tons (5.1%)
3. Private Recyclers/business direct-9731.21 tons (89.1%)

The total amount of total recycled material for year 2003 reported was 10,919.76 tons for the County. As shown above, the vast majority of the material was recycled by private recycling companies and/or directly by the business that generated the material. Private recyclers manage their own materials through a vendor network they have established. Additional information on Lewistown Borough’s recycling program and the MCSWA recyclables drop-off program is presented in the following sections, 3.1 & 3.2.

The MCSWA is proposing an extensive, flexible, and expandable recycling program to serve the majority of the County that does not currently have convenient recycling opportunities.

#### 3.1 Lewistown Borough

Lewistown Borough is the only mandated municipality in Mifflin County required to provide curbside recycling under Act 101 requirements. Lewistown Borough operates a successful and comprehensive municipal curbside collection operation for municipal waste and recyclables. In 2003 Lewistown Borough documented over 600 tons of recyclable materials as reported in the Mifflin County Act 101 Annual Recycling Report. The materials documented included aluminum tin, plastic newspaper OCC, mixed office paper, yard waste, miscellaneous metals, wood, magazines, leaves, and Christmas trees.

During the preparation of the grant application the MCSWA worked closely with the Borough of Lewistown. The 902 Grant Application contains a letter from the Borough of Lewistown supporting the recycling programs that are outlined in the grant.

#### 3.2 Existing Drop-off Centers

With only one municipality having mandatory curbside collection, public and private drop-off centers are the focus of the County's recycling strategy. With the County's low population density, drop-off centers are potentially the lowest cost, and offer the most feasible alternative for collection of recyclable materials. There are a number of existing private and public drop-off facilities in Mifflin County. The existing (and proposed) public drop-off sites are presented in Figure 1. As shown, Armagh Township, Derry Township (Barner Landfill & proposed MCRRD), and Union Township currently host public drop-off sites. Because of its central location, the existing Barner Landfill recycling drop-off provides relatively convenient recycling access to approximately 35,000 residents.

Recyclables are collected at the Barner Landfill in compartmentalized roll-off containers. The MCSWA’s Barner Landfill will become the site of the proposed MCRRD. The recycling operation at the facility will be operated by the MCSWA during and after the transition period into the fully functional municipal waste transfer operation.

**3.2.1 Materials Accepted by Existing Drop-off Sites**

The MCSWA’s current drop-off recycling program accepts the following Act 101 materials to be recycled at various locations in the County:

**Barner Landfill – Act 101 Materials**

- Aluminum Cans
- Steel/ bi-metallic cans
- Newsprint
- Corrugated cardboard
- Clear glass containers
- Yard waste (brush and leaves)

**Barner Landfill – Non-Act 101 Materials**

- Magazines/catalogs
- Lead/acid batteries
- Ink jet cartridges
- Scrap metal
- Christmas tree collection (seasonal)
- Mixed paper
- White goods
- Tires

**Union Township (Township Building)**

- Aluminum Cans
- Steel/ bi-metallic cans
- Newsprint

**Armagh Township (Maintenance Garage)**

- Newsprint

The MCSWA services the compartmentalized roll-off containers at the Armagh Township site and Union Township site on an as needed basis using the MCSWA’s hook truck. Newsprint from each of these sites is consolidated into bulk bins and taken in bulk to Pheasant Valley Recycling. Similarly, aluminum cans and steel/bi-metallic cans are emptied from the roll-off container into separate bulk holding bins at the Barner Landfill. When the bulk containers are full, they are picked up and handled in the following manner:

1. The aluminum and bi-metal can bin is delivered back to the MCSWA where it is dumped into large mesh wire storage bins and contamination removed. The bin is then returned to the drop-off site.
2. The paper bins are cleaned of obvious contamination and delivered directly to a vendor (when there is no other bin available to “swap out” and be returned) or is swapped out with an empty bin and the full bin is delivered and stored by the MCSWA when there is time to deliver it to a vendor.

The double handling of the recycling bins and the contamination problem support the 902 grant request for the more efficient and effective VQuip recyclable collection system.

Materials brought directly to the Barner Landfill recycling drop-off site are unloaded in designated areas by residents. As necessary, MCSWA staff work to store, organize or process the materials. In 2003 the MCSWA recyclable collection program collected a little over 550 tons

of recyclables. This relatively small quantity of recyclables is partially due to a variety of problems with the existing recycling program including degraded collection equipment, poor residential participation tied to limited educational efforts, recyclables contamination problems, and a limited number of drop-off sites (none of which appear to maximize collection efficiency). It is expected that the proposed MCSWA recycling program, including the improved recycling education efforts, will result in increased recycling participation and recyclables collection totals.

At this time, OCC is the only recyclable material that can be baled somewhat economically by the MCSWA. Other materials are not currently baled because the only available baler is an old downstroke baler that is in poor condition and has limited capabilities.

The MCSWA plans to continue to accept Act 101 and non-Act 101 materials at the proposed MCRRD and certain Act 101 materials at public drop-off sites. The MCSWA will confirm the list of recyclable materials that will be accepted at the MCRRD and drop-off sites closer to the time of actual implementation of the program. The majority of the Non-Act 101 materials that will be recycled will be handled outside of the building.

**3.3 Existing Recyclables Consolidation, Processing and Marketing**

Currently, without the infrastructure to process (i.e. bale) and store recyclables at the Barner Landfill site, the MCSWA primarily uses two local recycling facilities in Mifflin County to market recyclables. Recyclables materials are consolidated, processed and marketed as follows:

**Act 101 Recyclables:**

**Newspaper:** Collected on-site and at drop-off sites in bulk bins and delivered in bulk directly to Pheasant Valley Recycling for payment.

**Aluminum and steel cans:** Collected in bins both on site and at drop-off locations. The bins are emptied into bulk holding bins on site and when full, delivered to either Pheasant Valley Recycling or Joe Krentzman and Sons for payment.

**Corrugated cardboard:** Collected on site, baled and stored. When a sufficient amount has been baled, the cardboard is picked up by Pheasant Valley Recycling for payment.

**Clear Glass:** Collected on site as a drop-off item and then delivered to the Borough of Lewistown for inclusion with their bulk clear glass.

**Yard Waste:** Stored on site in a designated area and allowed to compost. As needed, the large tub grinder from the Clinton County Solid Waste Authority is rented and utilized to grind the accumulation of all large brush, limbs, trees and Christmas trees. The compost is available for citizens to take (currently free of charge) and is used for mulching/revegetation purposes on site.



### Legend

- Existing Drop-off / Proposed Drop-off and Recycling Center
- Existing Drop-off Sites
- Proposed Drop-off Sites
- Interstates
- State Routes
- Mifflin County Boundary
- Township Boundary
- Borough Boundary

### Existing and Proposed Public Drop-off Sites

- Barer Landfill / Refuse and Recycling Depot
- Armagh Township (Maintenance Garage)
- Union Township (Township Building)
- Burnham Borough (K-Mart)
- Granville Township (Wal-Mart Shopping Plaza)
- Oliver Township (Township Building)
- Kistler Borough (Fire Hall)

0 2,500 5,000 10,000  
Feet



**Non-Act 101 Recyclables:**

**Lead/acid batteries:** These are collected as drop-off items on site and delivered to either Pheasant Valley or Joe Krentzman and Sons, Inc. for payment when a sufficient number is collected.

**Scrap metal:** Collected in bins on-site and delivered in bulk to Pheasant Valley Recycling and/or Joe Krentzman and Sons for payment.

**Mixed paper and magazine/catalogs:** These are collected on site in drop-off bins and delivered in bulk directly to Pheasant Valley Recycling for payment.

**Tires:** Tires are collected on-site as drop-off items for a fee. Mahantango Enterprises picks up the tires in open top trailers upon notification when there is an accumulation of less than, but close to five hundred tires. Fees: Car and light truck tires are \$2.00 each off the rim and \$3.00 each on the rim. Bulk loads of tires are \$140.00 per ton regardless of quantity. Cycle, mower, and ATV tires are \$1.00 each. The MCSWA pays Mahantango Enterprises \$80 a ton plus \$150 per load handling fee for the disposal of the tires.

**White Goods:** Collected as drop-off items on site. Chlorofluorocarbon (CFC) containing items are decontaminated by Fosters Appliance World. When a sufficient number is accumulated, CFC containing devices are loaded into bulk bins and delivered to either Pheasant Valley Recycling or Joe Krentzman and Sons, Inc. for payment. The disposal fee charged at the MCSWA for freon-containing appliances is \$15.00 per unit and \$5.00 for non-freon-containing appliances. The MCSWA pays \$10.00 per freon-containing unit to have the gas removed. The current provider of this service is “Fosters Appliance World” of Lewistown, who is certified in freon removal.

**3.3.1 Recyclables Markets**

The MCSWA is determined to increase the quantity of recovered recyclables in order to expand market opportunities and improve the network of outlets supporting the program. The use of the proposed multi-purpose baler and the ability to store and ship truckloads of baled recyclables from the proposed facility will improve the marketing opportunities for recyclable materials. In order to help the economy of Mifflin County, the MCSWA would prefer to market the collected and processed recyclable materials to local vendors. It must be noted however that the MCSWA will be comparing local versus non-local prices routinely, including per ton resale costs and transportation costs to determine the best possible price on the collected and processed material in order to make the recycling program as self-sufficient as possible. Hence, all collected and processed recyclable material will be marketed, as would any commodity, in order to procure the best possible sale price. This may involve material marketing, quote requests, material bids, contracts, etc. It must be stressed that the final selection of end markets will primarily be based on securing the best price per ton for the material (after cost of transportation), whether these markets are regional or local.

Regardless of the availability of local markets, most Mifflin County residents are not currently recycling. The program proposed by the MCSWA will both fill this void and give the general public and local businesses numerous centralized drop-off points for materials. Although there are several local private outlets for certain recyclable materials, there has been little or no initiative by the private sector to collect a variety of recyclable materials from residents and smaller businesses. For example, there is no private vendor collection of

residential plastic bottles. As proposed, the expanded MCSWA program is designed to collect and process plastic bottles. Discussions with local private recyclers have indicated NO intent or interest to venture into plastic recovery in the future, further emphasizing the need for the MCSWA to provide this service.

If no recyclables process center and equipment is provided, it is expected the entire recycling program will continue to be tied to the few local private recyclers and the recycling opportunities for Mifflin County residents and businesses will continue to be extremely limited. It is noted that without improved recyclables outlets and an overall improved recycling and municipal waste program administered by the MCSWA, the serious problem with illegal dumping in the County will continue.

The MCSWA is supportive of Lewistown Borough’s recycling efforts and will continue to work cooperatively with Lewistown to evaluate market opportunities as the MCSWA’s recycling program evolves. As previously stated, the Borough of Lewistown supports the MCSWA’s proposed program.

### **3.3.2 Estimated Recovery of Recyclables**

From estimates developed using the EPA method and the 2003 R.W. Beck Statewide Municipal Solid Waste Composition studies, there are at least 6200-9000 tons of additional recyclable material to recoup out of the Mifflin County municipal waste stream. This estimate methodology is included in the 902 grant application.

VQUIP (a private/ specialized recycling equipment vendor) generated a “Haul-All Depot Recycling Analysis for Mifflin County”. Based on the Haul-All analysis it is estimated that seven (7) new and/or improved drop-off locations will generate approximately 1,000 tons of Act 101 recyclable materials per year. Please note this tonnage estimate DOES NOT include:

1. any material generated by the proposed commercial cardboard recycling program
2. any of the current non-Act 101 material that is being recycled by the MCSWA
3. or any of Act 101 and non-Act 101 recyclable material that will be recovered from the municipal waste stream on the transfer station tip floor. The Haul-All analysis is included in the 902 grant application.

The MCSWA’s recycling goal, recognizing the program will expand and look for ongoing opportunities from the residential and commercial sector, is to increase the programs Act 101 material recycling recovery by 1,000 tons for the first year of the program and by at least 1,500 tons in the second year. Recycling education will be vastly improved and the existing number of recyclables drop-offs site will be expanded at start up and on an ongoing basis. Without constructing a facility with the infrastructure and equipment to capture and process these materials, the proposed recycling program will not be possible.

Based on expected waste quantities from contracted haulers and cash customers, the MCRRD will have a sufficient annual operating budget. The “avoided cost” of disposal for each ton of recyclables removed from the waste stream will increase the MCSWA’s operation budget by roughly \$40 per ton for each additional ton of recyclables captured.

### 3.4 Recycling Education

Currently, the MCSWA distributes a semi-annual newsletter and maintains an internet web site with updated information about the recycling program and area recycling facilities. The MCSWA participates in any requests from the public or private organizations to gain recycling education/ information. Additionally, the MCSWA has assisted the Mifflin County School District and other school districts with on-site tours and has provided information on recycling. The MCSWA plans to substantially expand the area of public awareness.

The MCSWA plans to expand its recycling education program in a manner consistent with the recycling education goals identified in the Plan. The MCSWA will pursue funding to expand recycling education (through the Section 902 grant program) because a more comprehensive recycling education program is not practical under the existing budget constraints faced by the MCSWA. The MCSWA has already purchased a mascot and a recycling van to start public education efforts for the 2004-05 school year.

### 3.5 Other Activities Related to Recycling

The MCSWA fully supports recycling program efforts from citizens and/or organizations and assists with open dump cleanup and other litter cleanup projects by providing free disposal services. Several organizations, including the Mifflin County Chapter of Pennsylvania Cleanways and the Lewistown High School Conservation Club work to clean open dumps and litter filled areas.

## 4.0 RECYCLING GOALS ESTABLISHED IN THE 2003 MUNICIPAL WASTE MANAGEMENT PLAN

As stated in Section 2.0 of the report, the proposed MCRRD has been designed to provide the needed infrastructure to support recycling goals and initiatives identified in the Mifflin County Plan. In February 2003, the Mifflin County Commissioners adopted revisions to the Mifflin County Plan, which calls for increased and improved recycling in Mifflin County.

The recycling goals/ initiatives identified in the Mifflin County Plan include:

- Provide, maintain, and expand drop-off collection services to be available to all County residents.
- Encourage, maintain, and potentially develop curbside collection.
- Develop recycling collection events.
- Continue existing yard waste efforts and expand yard waste collection where possible.
- Improve the effectiveness of the existing recycling programs through a comprehensive public information and education program that will be communicated to and coordinated with local municipalities.
- Work with existing haulers to encourage recycling.
- Develop a system to better document and report to the County the recycling currently occurring in the residential, commercial, and institutional sectors.

- Use recycling efforts and educational efforts related to recycling as a means to deter illegal dumping activities by identifying recycling as an alternative to dumping.
- Identify funding sources to be used to help implement County recycling goals.

The construction of the MCRRD is the key step in improving Mifflin County’s ability to increase recycling opportunities for its residents. The proposed system is designed to provide for a more efficient system for recyclables collection and processing. The centrally located facility will serve as the hub for an expanded network of drop-off centers. With implementation of the new MCRRD, the MCSWA plans to improve tracking/ documentation of County recyclables quantities, to increase residential recycling education and participation, and to accelerate progress toward achieving Pennsylvania’s 35 percent recycling goal.

It is the intention of the MCSWA to use (and advertise) the MCRRD as the primary recyclables drop-off location within the County. With the development of the facility, the MCSWA also proposes to develop an improved comprehensive public information and education program to educate and encourage County residents to use the facility and other County drop-off sites. Operation and processing details related to the proposed MCRRD are provided in the following section.

**5.0 PROPOSED MIFFLIN COUNTY REFUSE AND RECYCLING DEPOT**

As the closure of the Barner Landfill approaches, the MCSWA will transition to a waste transfer and recycling drop-off and processing operation. The proposed MCRRD will be located adjacent to the permitted area of the existing Mifflin County Barner Landfill in Derry Township, Mifflin County.

As depicted in Figures 2 through 4, the MCRRD is designed as a multi-use waste transfer facility that includes a material processing, storage and shipping center. Design of the Recycling Depot within the transfer facility building (rather than constructing a separate recycling building) allows for a one-time construction cost savings (seen in a reduced cost per square foot). Operationally, one facility used to receive both waste and recyclables benefits through shared use of the infrastructure (i.e. common tipping floor, utilities, operating equipment, staff, etc.)

As shown in the MCRRD floor plan presented in Figure 2, the fully enclosed building includes four vehicle unloading bays; two bays will be dedicated to the solid waste transfer operation; and two (2) bays will be dedicated to recycling activities. The recyclable material bays will include facilities for the separation, storage and loading of recyclable materials. An overhead door located along the recycling portion of the facility will also be used to facilitate recyclables handling. The overhead door may be used as/if needed to load loose recyclables with a loader inside the facility into open top bulk recycling containers placed outside the facility. The entrance roads, vehicle storage and access areas and facility entrance will be paved to allow combination truck ingress/egress.

As an improved recycling program and enhanced network of drop-off sites is established, the MCSWA will focus on developing an efficient collection system. The MCSWA hopes to service the drop-off sites with a new recyclables collection vehicle that would be eligible for up to 90 percent funding through the Section 902 Grant. The collection frequency and corresponding route schedules will be modified as needed, and will depend largely on the

volume of collected materials at each site. After servicing the drop-off sites, the collection vehicle will return to the centrally located MCRRD. The MCSWA will work to create efficient collection schedules & routes based on volumes received of each recyclable material at all drop off locations.

**5.1 Municipal Waste Receiving and Processing**

Wastes to be accepted at the transfer facility portion of the proposed MCRRD include municipal solid waste (typical household and commercial non-hazardous waste), construction/demolition waste (concrete, brick, block, wood, etc.), and non-hazardous residual solid wastes (with specific PADEP approvals on a case-by-case basis). Waste origin will be primarily from Mifflin and Juniata Counties. The permitted volume of waste to be processed is 300 tons per day average, and 390 tons per day maximum. From 2000 through 2003, annual waste receipts at the Barner Landfill site averaged 39,500 tons per year. For the transfer operation, the MCSWA anticipates an annual waste acceptance rate of about 38,000 tons (excluding sludges and certain residual wastes that will not be processed by the facility). This correlates to about 133 tons per day (5.5 days per week). Based on the MCSWA’s projections of tonnage and revenues, the anticipated annual tonnage will generate sufficient revenue to operate the MCRRD.

Municipal waste collection vehicles will enter the Transfer Station via paved access roads, and either pull in or back in to the tipping floor, depending upon traffic load. The transfer station portion of the MCRRD is designed as a standard open-top transfer facility, where waste is dumped onto a tipping floor and pushed into transfer trailers located within a lower level trailer-loading bay. Tipping bay restrictions will be enforced; selected bays (one or two, depending on volume) will be restricted for use by commercial haulers. At the operational discretion of the MCSWA staff non-commercial haulers (residential haulers utilizing pick-ups, small dump trucks, etc.) will primarily use a dumping area outside the facility and will be segregated from the commercial haulers. Signs and traffic cones will be used to route commercial and non-commercial vehicles into the designated tipping bays. Generally, overhead doors will be closed and/or orange safety fencing will be used to limit access within the tipping bay area.

Once inside, the waste load will be dumped onto the transfer area tip floor. A “dump and pick” operation will recover any obvious recyclable materials. The “dump and pick” recovery is not intended to be a substantial portion of the recycling operation, but is an additional benefit facilitated by the municipal waste operation and recycling operation being in the same building. The “dump and pick activity” will take place in the transfer facility portion (estimated at 49 percent of the total facility). Therefore, the “dump and pick” operation has nothing to do with the Section 902 grant request and NO reimbursement is requested to support collection of recyclable materials from the transfer station side of the MCRRD. The “dump and pick” recovery of recyclables is addressed further in section 5.2.1.

Municipal wastes will be collected and loaded into the transfer trailers by a front-end loader. An in-house scale will be used to weigh transfer trailers in order to achieve the maximum legal highway weight. Once full, the loaded transfer trailer will be connected to a tractor for hauling to the destination facility. An empty transfer trailer will replace the loaded trailer on the trailer floor. Recyclables receiving and processing methods are described in Section 5.2.

INSERT FIGURE 2 - FIGURES 2-4 ARE NOT INCLUDED IN ONLINE VERSION OF THIS REPORT

INSERT FIGURE 3

INSERT FIGURE 4



## 5.2 Recyclables Receiving, Processing and Marketing

It is important to recognize that the MCSWA is still in the planning phase of developing a comprehensive and flexible recycling system and municipal waste transfer operation. Although the MCSWA has already worked to develop an efficient, effective, and sustainable conceptual plan for receiving, processing, and marketing recyclables, the MCSWA intends to remain flexible, make changes on an ongoing basis, and adapt as necessary to maximize efficiency and improve the system.

### 5.2.1 Receiving

Some residents will arrive at the proposed MCRRD with recyclables to drop-off, while others will be “cash customers” with municipal waste and/or recyclables. “Cash customers” are defined by the MCSWA as customers who deliver municipal waste directly to the landfill and pay the disposal fee on a cash basis for each delivery. Typically, these are made up of private individual homeowners who have elected to bring their municipal waste directly to the landfill for disposal in their own vehicles. Residents also use the site frequently for yard waste disposal (a service that is often not provided by their private waste hauler).

All persons wishing to drop-off recycles will be required to source separate the materials (as is done currently at the Barner Landfill). In order to limit residential traffic inside the facility, a VQUIP drop-off site is proposed to be placed in a location outside the gate of the facility or somewhere else on-site that will have minimal impact on facility traffic flow. This location of the MCSWA drop-off site has not been finalized, but keeping recycling customers separated from other facility activities will be important to the safe and efficient operation of the proposed MCRRD. Section 5.2.4 addresses on site traffic management in more detail.

After returning from a regular Act 101 recyclables service route of the County drop-off sites, the VQUIP truck would make a final service stop to collect recyclables from the bins at the MCSWA site. After this final stop, the VQUIP collection vehicle would unload its collected materials in a consolidation area adjacent to the facility or directly on the recyclables tip floor (provided at the time the baler and staff are ready to receive and process the material). The consolidation drop-off area would be made up of jersey barriers and would be used to consolidate like Act 101 materials.

In concept, residents with recyclables-only may use the VQUIP drop-off for depositing Act 101 materials and then leave with no impact or minimal impact to on-site traffic/ activities. Residents with waste and recyclables may drop-off recyclables prior to disposing of municipal waste at the MCRRD. It is envisioned that municipal waste dump boxes may be placed for easy use by “cash customers” to expedite small residential customer waste deliveries. Once full, these dump boxes would be dumped at transfer station tip floor, loaded, and transferred to a disposal facility. A separate drop-off area (or areas) for non-Act 101 materials (and for any materials that will not require processing in recycling facility) will be available to residents.

At this time, the Act 101 and non-act 101 recyclable materials proposed to be accepted by the MCSWA program include:

- Clear glass
- Bi-metal food cans
- Aluminum cans
- Newsprint
- Corrugated cardboard
- Yard Waste (leaf and brush)
- Mixed paper
- #1 and #2 Plastics
- Magazines/ catalogs
- Ink Jet Cartridges
- Lead/acid batteries
- Scrap metal
- White goods
- Tires
- Christmas trees (seasonal)

Leaf waste/ yard waste will be accepted for composting in an area adjacent to the new facility. To the greatest extent feasible, the handling of non-Act 101 recyclable materials will be conducted outside of the MCRRD building.

### 5.2.2 Processing

After Act 101 recyclables have been collected by the MCSWA recycling program and consolidated adjacent to the recycling portion of the MCRRD, they will be processed. A skid steer loader will collect consolidated materials from jersey barriers and feed a horizontal baler. As operationally feasible, the VQUIP truck may sometimes be able to unload directly onto the recycling tip floor near the baler to expedite processing. It is the intention of the MCSWA to bale Act 101 recyclables using a universal 2-ram baler capable of baling and self-tying a variety of Act 101 designated materials. Finished bales will be stored on the floor of the recycling portion of the MCRRD or in the storage trailer purchased for such use (which is included for reimbursement in the 902 grant).

It may also be necessary to use one or more bins inside the facility to collect recyclables retrieved from the “dump and pick operation” on the transfer side of the facility. It is suggested by GF that the MCSWA use a hopper (4-6 cubic yard capacity) that can easily be loaded, moved and dumped using a skid steer loader or forklift. Primarily it is expected that cardboard and scrap metal will be the targeted materials for the “dump and pick” operation. Based on field observations and data from waste characterization studies (i.e. waste sorts), cardboard is often a substantial portion of the waste stream and may easily be recovered from the tip floor and placed in a hopper.

Improving the outlets for recyclables and improved recycling education of residents and businesses may help to reduce the “dump and pick” efforts as the percentage of recycling increases and recyclables are diverted from the waste stream. Whenever possible the MCSWA will identify and contact non-recycling establishments that are unnecessarily disposing of recoverable recyclables. As feasible, the MCSWA will provide alternates to these industries/businesses so they have the option to remove the recyclable material from the waste stream and minimize the amount of recyclable material that is handled by the transfer station portion of the facility.

**5.2.3 Marketing**

All recycled materials will be transported offsite to designated recycling facilities, markets, or processed (i.e., leaf waste/ yard waste) in accordance with 25 Pa Code § 279.271. After processing recyclables, the MCSWA plans to market processed/baled recyclables in a manner that is economically sensible and supports a self-sustaining recycling operation and transfer facility.

Marketing efforts will consider local and regional markets, bidding, contracts, cooperative efforts with municipalities and any other economically feasible market opportunities.

**5.2.4 Proper Management of Residential and Commercial Traffic**

Based on the MCSWA’s extensive experience operating the Barner Landfill, it was determined to be critical to segregate residential traffic from commercial vehicles accessing the transfer station to the greatest extent possible. Residential customers could include recyclers-only and also cash customers wishing to dispose municipal waste and/or drop-off recyclables. The proper management and segregation of these two traffic streams is required in order to operate the MCRRD efficiently and safely and to minimize associated liabilities.

Proper management of the traffic patterns for the proposed facility is an operational concern of the MCSWA that is magnified by the large volume of residential traffic that currently enters and exits the Barner Landfill site. At this time, 1,270 residents enter the site so regularly that they are stored into the landfill’s tare weight system. The tare weight system was developed by the MCSWA. Residents complete a form requesting their phone number, address, year, make and model of their vehicle, and the vehicle’s tare weight. The vehicle tare weight is then registered in the scale house’s software program for future weigh-ins. Registered vehicles simply weigh in, pay the computed fee, dump and leave. The scale operator at the Barner Landfill estimates at least an additional 1,500 residents use this site on a regular basis, but have declined to be entered into the tare weight system. Overall it is estimated that 5,000 different residential vehicles (typically representing households) utilize this site on an annual basis. This equates to roughly 250-350 cash customers per week, and frequently much more depending on the week. Each of these customers has the ability to recycle at the MCRRD and will be encouraged to do so by the MCSWA staff. Further, residents have the financial incentive to recycle because of the avoided costs for transfer/ disposal.

When considering the size and design/ layout of the facility (refer to figures 2-4), the MCRRD incorporated room to tip, process and store, and consolidate the collected material for shipment to end markets. However, the design intentionally did not incorporate a complete flow through/ drive through recycling drop-off within the recycling portion. Operational concerns (including inhibited traffic flow) and project budget restrictions did not support a design that would receive customers in the same area that would have processing activities, equipment traffic and stored bales of material. The recycling side of the building is 6,200 square feet, somewhat smaller than the average recycling center but comparable to many other recycling centers in the State. Another important aspect was safety considerations for the general public and staff. The intrusion of so many private vehicles on a daily basis into the facility is a potential safety hazard. Further, traffic inside the facility would not allow the MCSWA staff to efficiently utilize the available processing and storage space.

Considering these operational factors, and as stated above in Section 5.2.1, the most feasible option to efficiently and safely service customers with recyclables is to locate the source separated recyclables drop-off VQUIP system outside the gate of the facility or somewhere on-site that will minimize impact to vehicles entering the scale at the facility.

**6.0 PROPOSED RECYCLING DROP-OFF PROGRAM AND SITE LOCATIONS**

Once constructed and in operation (anticipated to be completed early fall 2004), the MCRRD will support an expanded network of drop-off recycling sites. The MCRRD will function as a recycling operation until (and after) the landfill closes and the MCRRD transition to the completed waste transfer and recycling facility. The MCSWA plans to purchase all recycling bins needed for the program as proposed in the Section 902 Grant. The program is proposed to be initiated in early 2005. The MCSWA will implement drop-offs sites in a phased approach to enable a smooth transition into the expanded recycling program. The following section identifies proposed recycling drop-off sites.

**6.1 Proposed Residential Drop-off Sites**

In order to identify proposed public drop-off sites, the MCSWA distributed letters to each of the Borough and Township supervisors to determine if they were interested in hosting at least one public drop-off location. Based on the initial responses, three municipalities are interested in continuing to host existing public drop-off sites and four municipalities are interested in hosting newly proposed public drop-offs. The existing and proposed drop-off sites are presented in Figure 1. As proposed, materials will be accepted at the proposed drop-off site as follows:

**Burnham Borough (K-Mart or Giant Plaza)**

- Aluminum cans
- Steel/bi-metal cans
- Cardboard
- Newspaper
- Mixed paper
- Magazine/scrap mail
- Plastics #1 & #2

**Granville Township (Wal-Mart)\***

- Aluminum cans
- Steel/bi-metal cans
- Cardboard
- Newspaper
- Mixed Paper
- Magazines/ scrap mail
- Plastics #1 & #2

**Oliver Township (Township Building)**

- Aluminum cans
- Steel/bi-metal cans
- Cardboard
- Newspaper

**Kistler Borough (Fire Hall)**

- Aluminum cans
- Steel/bi-metal cans
- Cardboard
- Newspaper

\*Note: The proposed Granville Township (WALMART) and Burnham (Kmart/Giant Plaza) drop-off sites along with the MCRRD drop-off will accept plastics #1 & #2 and magazines/ scrap mail, in addition to the aluminum cans, steel/ bi-metallic cans, cardboard, & newspaper accepted at all of the drop-off sites. These locations are centrally located sites and will be used as test sites to gauge the collection/ participation of plastics and magazines/ scrap mail. In the future, as

recyclables drop-off sites are implemented and further evaluated, sites may be added, deleted, or relocated as decided by the MCSWA. Materials will be evaluated on an ongoing basis.

After the MCSWA confirms drop-off site locations and equipment installation begins, highly visible recycling signage will be provided to ensure the site is easily recognized by residents as a public recyclables drop-off location. In addition, the MCSWA will initiate a public education campaign to advertise the drop-off locations and proper use. The MCSWA understands that aggressive and continuous public education and advertising is critical to advancing our recycling program. The MCSWA has purchased a recycling mascot & recycling van and contacted local grade and middle schools to start educational efforts for the upcoming 2004-05 school year. The MCSWA currently advertises the acceptable recyclables materials in the local newspaper on a quarterly basis.

## **6.2 Drop-off Site Criteria**

The following site criteria should be considered while evaluating potential residential recyclables drop-off sites:

- Willingness of municipalities to participate
- Geographic distribution – a centralized location, preferably within a 5-10 mile travel distance of residents (preferably where convenient recycling is not already available)
- Minimal or no construction requirements to prepare site
- Level surface – preferably paved
- High visibility, well lit, and easily monitored
- Location should already be frequented by people making regularly planned shopping trips (e.g. grocery stores, shopping plazas)
- Adequate space for safe access, parking, and for servicing without disrupting the site’s primary business activity

## **6.3 Proposed Recycling Drop-off Equipment**

To determine the best suited recycling bins and collection vehicle needed to service the existing and proposed recyclables drop-off sites in Mifflin County, the MCSWA visited and evaluated drop-off collection programs in Cambria County, Lycoming County, Centre County, and Clinton County. Input from other Counties and from several recycling coordinators was also considered while the MCSWA selected recyclables drop-off collection equipment.

Based on all the information gathered during the evaluation of drop-off recycling equipment it was determined that the VQUIP system offered the best opportunity in providing a successful drop-off collection system in Mifflin County. This determination was based on the following considerations:

- Existing drop-off recycling equipment is very degraded and does not efficiently meet the needs of the existing recyclables drop-off system (or an expanded drop-off system).

- The MCSWA does not have a large capital investment in the existing recycling equipment; therefore the timing is sensible for a transition into a VQUIP collection system. VQUIP has been specifically designed for drop-off collection and been successfully implemented in 12 Pennsylvania Counties (including rural counties with very comparable demographics to Mifflin County).
- The VQUIP system is specialized & patented recycling equipment designed with customized openings proven to reduce contamination of recyclables.
- The VQUIP system maximizes efficiency by using specialized collection trucks to collect 1 or 2 materials from all sites to complete a load. This method eliminates the need (in a roll-off type system) for making a trip to dump materials every time a drop-off site is serviced. The VQUIP system uses individual, single stream or split stream containers that allow the flexibility to add a bin as needed to increase collection capacity for a higher volume material.
- The professional appearance (aesthetics) of the equipment helps to promote recycling and also the proper handling of recyclables to persons utilizing the drop-off sites.
- Because the equipment is patented, the MCSWA does not have to go out for bid to procure VQUIP equipment.
- The PADEP has been very supportive through funding VQUIP systems in the past. VQUIP recycling bins are included in the state “Piggy-back” purchasing program.
- The MCSWA is in the developmental phase of a new drop-off collection system. The roll-off type systems used for drop-off collection observed and evaluated by the MCSWA do not appear to offer the flexibility and overall performance and quality of the VQUIP system. The VQUIP system is a better design for the recyclables proposed to be collected by the MCSWA program.

The VQUIP system has successfully been implemented in the following twelve Pennsylvania counties:

- |             |              |
|-------------|--------------|
| ▪ Allegheny | ▪ Fayette    |
| ▪ Blair     | ▪ Monroe     |
| ▪ Cambria   | ▪ Pike       |
| ▪ Carbon    | ▪ Schuylkill |
| ▪ Crawford  | ▪ Somerset   |
| ▪ Dauphin   | ▪ Mercer     |

#### **6.4 Commercial Recycling and Drop-off Sites**

The MCSWA does not currently maintain any commercial recycling sites. However, the MCSWA has made contact with numerous commercial entities within Mifflin County and has found recycling interest among the commercial business community. The MCSWA provided the new mini-mall addition above the WALMART Plaza on Route US 522 West with roll-off containers for cardboard. Other businesses in this location remain interested in recycling. Pending the grant approval, the MCSWA will service these establishments. At this time, due to the limited quantity and poor quality of recycling equipment, it is not possible to efficiently service commercial cardboard generators.

In general, commercial recycling efforts will emphasize collection and documentation of cardboard recycling done by local businesses. Initially, the MCSWA proposes to service between 2-5 commercial drop-off sites within the County. This effort will be expanded as commercial recycling opportunities and interest grow. The MCSWA has evaluated a proposed cardboard recycling drop-off that would be located inside a building at the Mifflin County Industrial Development Corporation (MCIDC) located in Lewistown. Early discussions appear favorable, and the facility may utilize the MCSWA’s old cardboard baler to bale cardboard on-site. The MCSWA believes baling the OCC at the drop-off site will reduce handling and be more cost efficient than transporting it to the proposed MCRRD.

**7.0 SECTION 902 – GRANT ELIGIBLE COMPONENTS OF THE RECYCLING DEPOT**

The MCSWA understands that the successful implementation of an improved recycling program will require significant changes and upgrades to the existing recycling system and equipment. Rather than trying to maintain the existing old and degraded equipment used in the existing recycling program, the MCSWA intends to maximize the efficiency of the new program through the construction of the MCRRD, and also through procurement of new recycling equipment. The MCSWA has already procured a new roll-off recycling truck and is in the process of transitioning their current recycling bins to fit this new piece of equipment. The MCSWA is applying for Act 101, Section 902 recycling funding for the Recycling Depot, recycling equipment, and other eligible recycling components as identified below. As currently drafted, the existing Section 902 Grant Application submittal (deadline for submittal as extended to July 2, 2004) contains the itemized costs and additional information for the items requested by the MCSWA.

**MCRRD Facility Costs**

- Engineering costs associated with design of recycling portions of facility
- 51 percent of the building cost based on portion of the facility exclusive to Act 101 recycling activities (e.g. recyclables storage, processing, baler location, square footage of facility dedicated to recycling)
- 51 percent of site work

**MCRRD Operating/Collection Equipment & Materials**

- A multi-purpose/ universal, self-tying baler plays a critical role in the success of our recycling program. The storage capacity and marketability of the materials collected increases substantially when the material is consolidated and sold in bales, rather than loose
- Conveyor feed system to the baler w/ magnetic separator conveyor
- A skid steer loader with a multi-purpose bucket or attachments
- Jersey Barriers for consolidation/ storage
- A roll-off container truck to handle the internal storage, manipulation and delivery of any material to local recycling vendors (purchased, on site and operational)
- Additional roll-off containers of various sizes
- Recyclable container labels, tarps and signs

- Additional miscellaneous items needed to operate a recycling collection and processing program

**Public Education/Information Distribution**

- Funding to support and expand the quarterly newsletter and web page updates.
- Funding to support monthly media advertisements and County newspaper advertisements for the recycling program. The advertisements will be used to promote the overall program and promote public awareness.
- Funding for mailing fees (match reimbursable only) for mailings use to distribute our current newsletter to the townships and boroughs. The MCSWA also proposes to distribute newsletters from the MCRRD window and to have disbursement boxes for newsletters at the proposed facility and at proposed drop-offs.
- Funding to support educational materials and a recycling mascot (educational materials are match reimbursable and are eligible for up to 90 percent reimbursement). The mascot has already purchased.
- Used vehicle to promote recycling (mascot/ logo visible) also used to transport and store recycling education materials (Van already purchased).

**7.1 Other Considerations for Section 902 Grant Application Submittals**

During the preparation of the Section 902 Grant Application, the MCSWA should pay close attention to the grant application instructions and requirements. As identified in the grant application, the items specifically excluded as eligible for grant funds include:

- Land
- Postage
- Salaries and administration costs
- In-kind services (not related to program)
- Travel costs
- Solid waste collection vehicles
- Operation & maintenance
- Previous Department funded work/ equipment
- Street sweepers
- Plastic Lumber for benches/ tables
- Sales tax
- Storage garages
- Computers, hardware, software, office equipment
- Billboard advertising

The following bulleted list indicates some additional Section 902 Grant submittal considerations:

- Projects eligible for grant funding include those which divert source separated recyclable materials (clear glass, colored glass, aluminum, steel and bi-metallic cans, high-grade office paper, newsprint, corrugated cardboard, plastics, and source separated scraps and yard waste).



- The recycling program to be funded may not duplicate or interfere with other recycling programs; therefore, it may be necessary to advertise the intent to establish collection and/or processing programs (advertising was done by the MCSWA and submitted with the 902 application).
- The State’s “piggyback” purchasing program (PACC) should be considered for equipment purchases. The MCSWA has purchased a roll-off truck system as part of PACC contract. The proposed skid steer loader and VQUIP system are also included in the “piggyback” program.
- The MCSWA had discussions with PADEP concerning PADEP’s position related to burning of materials included in the County recycling program during the required 902 pre-application meeting. Ordinance requirements related to burning were also discussed at this meeting. Based on these meeting discussions PADEP indicated that burning requirements would not result in the MCSWA’s application being rejected. The MCSWA will continue to work with PADEP with the issue of burning and any other areas related to compliance with Act 101.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

In the past, Mifflin County has struggled to implement and expand its recycling program, primarily in the wake of financial and operational constraints associated with the MCSWA’s Barner Landfill. In large part these financial constraints were created by the diversion of a substantial percentage of Mifflin county waste to an out-of-county landfill by a private corporation. This was a direct violation of the former County Plan. Beginning in 1999, the MCSWA suffered a substantial loss in revenue corresponding to a loss of approximately 17,000 tons per year of municipal waste (historically the MCSWA received 45,000 to 48,000 waste tons annually). In response to the lost waste and revenue, the MCSWA was forced to make staff reductions, budget cuts, and operational changes for the survivability of the Barner Landfill operation.

During 2000-2001, the MCSWA launched an aggressive waste campaign to recoup the lost waste back to the Barner Landfill. The MCSWA campaign helped recover approximately 6,000 tons of the 17,000 tons of County municipal waste lost annually. The MCSWA waste recovery efforts led to a lawsuit that took over a 2 years to settle. During this time period, the MCSWA also initiated waste contracts with the local haulers to secure future tonnage for the MCSWA. The MCSWA secured approximately 38,000 tons per year through these waste contracts.

Gannett Fleming has been directly involved with the MCSWA through the majority of the financial security issues faced by the MCSWA. The MCSWA has demonstrated, and should be recognized for, their ability to successfully continue operation of the smallest Pennsylvania landfill through an extremely tough financial period. These past financial struggles limited the MCSWA’s opportunities to focus on Act 101 recycling, but should not be reason to hinder the MCSWA’s Section 902 grant approval. The Section 902 Grant funding will be critical in securing equipment and the recycling infrastructure that is vital to the successful implementation of an expanded recycling program. This equipment and recycling infrastructure is essential because the existing recycling system has very limited, inefficient recycling equipment coupled with minimal handling/ processing capabilities. These limitations have been contributing factors

that have prohibited the feasible development of a more sound recycling system in Mifflin County.

In spite of all these hindrances and financial struggles, Mifflin County has still achieved over a 25 percent County recycling rate in recent years; largely due to private recycling efforts and Lewistown Borough's contribution to recycling. Although Mifflin County has achieved a relatively high County recycling rate, the County is still below Pennsylvania's 35 percent recycling goal. In addition, the residential sector is very rural and many of the County's residents do not have access to convenient recycling outlets. These things considered, Mifflin County still has a long way to go to change the face of recycling in the County. It is for all of these reasons that the proposed MCRRD has been designed to include a designated recycling processing and storage area and infrastructure to support the recycling goals and initiatives identified in the Mifflin County Plan. This facility, including the proposed recyclables collection and processing system will improve the County's ability to provide a more economically feasible recycling program while simultaneously increasing the level and quality of recycling services available to County residents. The proposed MCSWA program targets the diversion of recyclables from the municipal waste stream in areas throughout the County that do not currently have recycling opportunities. In large part, the ability of the future program to work efficiently, effectively, and to be as self sufficient as possible is contingent upon the following key factors:

- Improved collection equipment to service drop-off sites
- Processing Equipment
- Receiving, processing, and marketing infrastructure for recyclables in the form of the MCRRD
- Improved recycling education
- Flexibility to make ongoing improvements and adjustments to the operations and program
- Support from PADEP in the form of program guidance in conjunction with Section 902 grant funding assistance

It is stressed that the most feasible, cost effective, and efficient implementation for the proposed program employs that all of the key components are implemented as a comprehensive recycling program.

The following recommendations are provided on the basis that Mifflin County has recently met the Act 101 requirement for updating the Plan (Plan). The updated Plan identified various recycling initiatives to be implemented as a means to improve recycling opportunities for Mifflin County residents. The MCSWA has been delegated the responsibility of implementing the Plan through a delegation agreement between the County and MCSWA that was executed by the County Commissioners on February 12, 2004. As the designated implementing entity for the Plan, the MCSWA plans to expand recycling opportunities, recycling education, and improve the overall structure of the Mifflin County recycling program. The successful implementation of the proposed recycling system will require an ongoing commitment by the MCSWA, support from PADEP, and will rely, in large part, on the development of the MCCRDR (and MCSWA administration) as the core infrastructure to collect, process, store and market recyclables generated in Mifflin County.

Gannett Fleming provides the following recommendation to the MCSWA as they move forward to implement the waste and recycling initiatives set forth in the 2003 Act 101 Plan:

- The MCSWA, as the designated implementing entity of the Plan, should continue to provide for and improve municipal waste disposal and recycling opportunities for County residents in a manner consistent with the Plan goals and initiatives.
- The MCSWA should implement an expanded network of drop-off recycling sites that will be supported by the infrastructure of the MCRRD. The recyclables drop-off sites should be evaluated on an ongoing and case-by-case basis to determine their viability. It is recommended the newly proposed sites be implemented in a phased approach to allow for a smooth transition by the MCSWA into operating additional recyclables drop-off sites.
- The MCSWA should continue to pursue state grant funding as necessary, with consideration of the State’s “piggy back” equipment purchasing program, to help offset the costs of developing the expanded and improved recycling program. Section 902 grant funding provides for up to 90 percent reimbursement of eligible costs for recycling equipment, containers, and educational outreach. Because grant funding is not guaranteed, the MCSWA should not rely on grant funding to sustain the long-term operation of its recycling programs.
- In March of 2004, the MCSWA implemented an administrative fee applied to each ton of County generated municipal waste to support the administration/ implementation of desired programs.
- Based on the portion of the proposed MCRRD dedicated for recycling activities, it appears that approximately 51 percent of the facility and associated construction costs will be eligible for submittal under the Section 902 grant program. All proposed collection and processing equipment will be eligible for the full reimbursement under the 902 grant guidelines, with the exception of the skid steerer and the new roll off truck and bins. The MCSWA is requesting an 80 percent reimbursement on these items, as it has been estimated that 20 percent of the time they will be used to handle/transport non Act 101 materials.

Based on discussions with the MCSWA, the proposed MCRRD recycling operation will require the following:

Operating/ Collection Equipment and Materials

- ✓ A multi-purpose/ universal, self-tying baler
- ✓ Conveyor feed system to the baler
- ✓ A can separator/crusher
- ✓ A skid steer loader with a multi-purpose bucket or attachments
- ✓ Jersey barriers
- ✓ A roll-off container truck to handle OCC commercial collection throughout the County and delivery to recyclers and as needed, the internal storage, manipulation and delivery of any material to local recycling vendors.
- ✓ Additional roll-off containers of various sizes
- ✓ Recyclable container labels and tarps
- ✓ Other additional and miscellaneous equipment

Public Education/Information Distribution

- ✓ Funding to support and expand the quarterly newsletter and monthly web page updates.
- ✓ Funding to support monthly media advertisements and County newspaper advertisements for the recycling program. The advertisements will be used to promote the overall program and promote public awareness.
- ✓ Funding for mailing fees (match reimbursable only) for mailings use to distribute our current newsletters to townships and boroughs.
- ✓ Funding for a mascot program, school educational programs (K-12) and public promotional efforts (parades, community events etc.)

Engineering, Permitting, and Inspection Services

- In addition to eligible operating equipment/ materials, and educational materials (listed above), there will be engineering, permitting, and inspection services costs associated with design of the MCRRD. The engineering, permitting, and inspection services exclusively tied to construction of the recycling portion of the MCRRD are eligible under the Section 902 grant program.
- It is recommended that the MCSWA pursue funding for all of the eligible components, as identified above, related to the construction of the MCRRD and implementation of the expanded and improved recycling program. The items listed above are intended to be consistent with the eligible items that may be listed in the Section 902 grant application that will be submitted by the MCSWA before the June 4, 2004 deadline (as extended). However, the final Section 902 grant submittal may vary from the information provided in this report based on additional information or guidance provided by PADEP or other sources prior to the Section 902 grant application submittal.

SECTION 904 PERFORMANCE GRANT

- The MCSWA should pursue Section 904 Performance Grant award funding that provides funding based on the total reported tonnage of eligible Act 101 recycled materials. Certified weigh slips are required as documentation.

SECTION 901 PLANNING GRANT

- As future recycling programs are investigated, the MCSWA could apply (through the County) for 901 Planning grant funding for 80 percent of approved costs for conducting related studies, surveys, investigations, and research and analysis.

DATA COLLECTION

- Awareness of the existing recycling activities and good data management can be an effective tool for identifying program deficiencies, improving data reporting and associated grant awards, and can help reduce recycling education costs through targeting educational efforts where they may be most needed. The

MCSWA may elect to do the following to improve recycling data collection in support of improving the system as proposed: (1) Develop a complete and updated list of commercial establishments in order to track ongoing efforts to get recycling data from commercial establishments, (2) target recyclables data (and collection) from the largest businesses first (especially those that may be involved in the recycling of corrugated cardboard which accounts for a large portion of commercial volume), (3) investigate the development of a recycling database to track residential and commercial recycling efforts.

## EDUCATION

- It is recommended that the expanded recycling program improve recycling education in the County. The MCSWA should work to improve its ability to distribute recycling education materials throughout the County. County residents and businesses should be updated regularly through a variety of media (newsletter, newspaper articles, radio, website, etc.), to ensure recycling awareness is maintained as a means of increasing participation. Some educational materials may be accessed from the following PADEP website:

<http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/coordinators/corner.htm>

NOTE: The MCSWA is still in the planning phase of developing a comprehensive recycling program and municipal waste transfer facility operation (i.e. MCRRD). The MCSWA intends to remain flexible during and after implementation of the MCRRD and corresponding recycling program. Continued flexibility is needed so the MCSWA can make any necessary improvements in operations and procedures in order to maximize the performance (e.g. efficiency, safety, reliability, financial stability, sustainability, etc.) of the entire municipal waste and recycling program.

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